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ABSTRACT

Student performance is the ultimate measure of teaching. Tests and examinations, however, do not usually tell the whole story of a teacher's effectiveness. Students learn more in college classrooms than most examinations reveal. Systematically measured student opinion is more informative than casual student report. With a formal rating form, a teacher can collect a great deal of independent information about a range of instructional outcomes. The included catalog of items for instructor-designed questionnaires helps teachers collect student reactions in three areas of instruction: (1) personal changes resulting from a course of instruction; (2) perceptions of an instructor's style, methods, and abilities; and (3) specific course elements such as written assignments, readings, laboratory work, textbooks, and exams and grading. Similarly, systems can be developed for interpreting and using the student reactions to improve teaching. A bibliography is included. (Author/MSE)

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STUDENT REACTIONS TO INSTRUCTION

Memo to the Faculty

From the Center for Research on Learning and Teaching

The University of Michigan

NO. 58
OCTOBER 1976

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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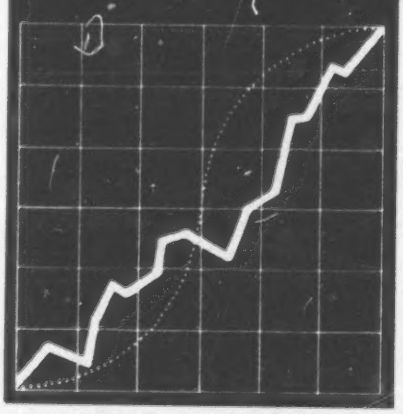

Teachers learn about their classroom effectiveness both from what their students do and from what they say.

Student performance is, of course, the ultimate measure of teaching. Well-designed instruments to assess student achievement in a course show whether students have gained new knowledge and acquired new skills. Achievement tests thus provide measures not only of students, but also of teachers. For a teacher who is concerned about impact on students, a good measure of student achievement is indispensable.

Tests and examinations, however, do not usually tell the whole story of a teacher's effectiveness. Students learn more in college classrooms than most examinations reveal. In addition to paying attention to what students can do, therefore, good teachers also listen to what students say. They are sensitive to student reactions to a course of study.

Systematically measured student opinion is more informative than casual student report. With a formal rating form, a teacher can collect a great deal of independent information about a range of instructional outcomes. Carefully designed questionnaires can cover academic outcomes, and they can also probe attitude change and other results of instruction. Through questionnaires a teacher can gather impressions about clarity of presentations, difficulty of exams, and many other elements of a course. The teacher gets independent judgments about these matters, and best of all, he or she collects the information quickly, inexpensively, and systematically.

A good deal has been written about testing student achievement. Readers of this *Memo* series may be familiar with past reports on the essay examination and the objective examination. Much less has been written about systematic collection of student opinion to improve instruction. Report No. 53, "Evaluation of Teaching," summarized recent research; the present *Memo* is designed more specifically as an aid for the teacher who wishes to benefit from student feedback. It covers some shortcomings of past approaches to the collection of student opinion and describes a promising new direction in gathering this information.

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COLLECTING STUDENT REACTIONS

Teachers have collected student reactions to college courses for over 50 years. The traditional procedures are familiar to most teachers. A student rating form, usually consisting of 10 to 40 statements, is given to a teacher by an administrator for gathering

student opinion. Each statement on the form describes some characteristic of a teacher, and students are asked to indicate the degree to which the statements apply to their teacher. After grades are turned in, the teacher receives from the administrator copies of student response sheets or a class summary indicating the percentage of students endorsing each of the items.

Several studies carried out by CRLT research scientists Wilbert McKeachie and Yi-Guang Lin have shown that this traditional means of collecting student opinion leads to little or no change in the quality of college teaching. Subsequent teaching by instructors who receive student opinion in this way is about the same as the teaching of those who receive no feedback.

The traditional approach (using a standard, inflexible instrument) falls short in two important respects. First, teachers generally collect information on rating forms that are unsuited to their individual courses. Items on traditional rating-forms, designed for comparisons between teachers, are usually too general to help individual teachers. The items often seem irrelevant and artificial to teachers who use them. It is unrealistic to expect much involvement when teachers are rated on forms created by someone else for someone else's purposes.

A second problem arises when teachers try to interpret and use rating results. Teachers sometimes cannot tell whether their ratings are good or bad. They do not know about ratings received in classes similar to theirs, and they do not know by what other standards they can locate strengths and weaknesses in their teaching. Even when teachers can interpret their ratings, they may not know what to do to improve. The traditional approach to ratings does not provide the guidance that teachers need if they are to develop more effective teaching strategies.

A New Idea

An influential article by CRLT Director Wilbert McKeachie (1969) stimulated the development of an approach to student ratings which overcomes some of the difficulties of traditional methods. Like other commentators before him, McKeachie pointed out that student ratings are used for different purposes. If the central purpose is to improve teaching, a questionnaire designed to collect specific suggestions and criticism from students will be most helpful. Most items on this type of questionnaire should therefor. be chosen specifically for an individual teacher's course. In addition to individualized items, each questionnaire might also include a few broad questions appropriate for the entire faculty.

A few years after McKeachie's paper appeared, the Measurement and Research Center at Purdue University devised a course evaluation system which met McKeachie's specifications. Purdue's approach (referred to as the CAFETERIA System) featured a core of five items used by all instructors and a catalog of about 200 items from which an instructor could construct a 40-item rating form. Purdue's CAFETERIA System also incorporated some other notable features. After the instructor selected a set of items, rating forms were computer printed. Student responses were read, tabulated, and printed by computer. The output received by the instructor included endorsement frequencies and the instructor's relative standing on each item.

The Purdue CAFETERIA System offered users a number of benefits. First, it increased rating specificity. Instructors got feedback about their specific concerns, not about matters that were irrelevant to them. Second, the system promoted teacher involvement; instructors got feedback on forms that they themselves created. And finally, the system increased rating interpretability. Teachers saw both their absolute and relative standings, and thus they were better able to interpret results. It is not surprising that the Purdue CAFETERIA System has attracted many users on the Purdue campus and elsewhere. (For more information about CAFETERIA, write to: Warren F. Seibert, Director, Office of Instructional Services, Purdue University, ENAD, Room 402, West Lafayette, IN 47907.)

CRLT's Instructor-designed Questionnaires

The Center for Research on Learning and Teaching recently devised its own system of instructor-designed questionnaires. Like the Purdue System, CRLT's approach incorporates both the general (the core items) and the specific (free selection of items from the catalog). Last year about a hundred University teachers used CRLT's Instructor-designed Questionnaires to collect student reactions to their courses. The system is now available to individual teachers and departments who wish to use student reaction as one means to evaluate their teaching.

The basic idea of the CRLT system is simple. Instructors receive a catalog consisting of 148 items (see Page 6). This catalog is the heart of the system. Each item in the catalog is a statement about the results of teaching, about a teacher, or about some aspect of a course. For each statement, the student indicates degree of endorsement: "strongly agree," "agree," "neither agree nor disagree," "disagree," or "strongly disagree."

With the catalog, the instructor receives a requisition form on which to indicate up to 30 items which express relevant concerns for his or her course. CRLT then prints the individually designed questionnaire, containing only the core questions and those items selected by the instructor. Copies of the form and answer sheets are provided for the instructor's class. After the answer sheets are filled in by the students, they are returned to CRLT for computer processing; a listing of results is then sent to the instructor. Unless different arrangements are made, the only person receiving the results is the person who selected the items.

SELECTING QUESTIONNAIRE ITEMS

The catalog of items for CRLT's program of instructor-designed questionnaires helps teachers collect student reactions in three areas of instruction. First, students can report on personal changes that resulted from a course of instruction. Second, they can use a large group of items to report their perceptions of an instructor's style, methods, and abilities. Finally, students can report on their reactions to such specific course elements as written assignments, readings, laboratory work, textbooks, exams, grading, and so on.

Student Change

CRLT's catalog was developed with the realization that different teachers have different objectives for students. The catalog therefore contains many items describing student changes in behavior and attitude. With the catalog, the teacher can easily gather student opinion about development of knowledge and skills, about changes in interests and curiosity, and about social, personal, and vocational development. Not all teachers have goals in all these areas. But all teachers have objectives, and CRLT's catalog tries to cover a wide range of objectives. Many other student rating forms have overlooked the possibility of asking students to report on changes in their own behavior and attitudes occasioned by the course and/or teacher.

Even within the five areas of impact, teachers have different goals, and so the item catalog provides choices for teachers. Items 1 to 11, for example, are designed to reflect the six levels of cognitive objectives described in Bloom's taxonomy: knowledge, concepts, application, analysis, synthesis, and evaluation. Item 1 covers factual information; item 2 covers conceptual understanding; item 3 focuses on application of learning; items 4 and 5 are on ability to analyze while items 6–9 are on ability to synthesize; and finally, items 10 to 11 cover the highest level abilities—evaluation.

The items on interests and curiosity reflect the work in classification of affective objectives by Krathwohl and his colleagues. In this area as well, instructors may have different objectives. Some instructors design courses simply to deepen appreciation (items 12–13). Other courses try to promote behavioral changes (items 14–15). For some teachers, sustained behavioral change is an important goal (item 16). Finally, a few teachers may design courses to affect a whole system of values (item 17).

Instructor Behavior

The second major area in which students can help instructors is a more familiar one. Several of the items describing instructor behavior and classroom climate were devised by Remmers at Purdue University over 50 years ago. In the years since, the pool of items for describing instructor behaviors has grown steadily. Items in the second part of the catalog cover the main areas in which students make judgments when they observe what teachers do.

McKeachie and his colleagues brought some order to this area several years ago when they performed numerous factor analyses on ratings of teachers and reported six areas in which students made discriminations about teachers. These six areas are reflected in the items in the second part of the catalog: teaching skill, rapport, interaction, feedback, organization, and difficulty.

The Michigan investigators found that over half the items in their extensive rating form had substantial loadings on a factor of teaching skill. Students give great weight to communication ability when making judgments about teaching skill. They give high ratings on teaching skill to instructors who seem to be clear (items 33–35), enthusiastic (items 36–38), knowledgeable (items 39–41), and sensitive to student difficulties (items 42–44).

Rapport items emphasize the instructor's empathy with students. The instructor who gets a high rating on rapport is perceived as friendly, democratic, open, and concerned. While rapport items describe the relationship between teacher and students, interaction items measure how much a teacher encourages student-student relationships. Ratings on a feedback factor reflect student perceptions of the degree to which the instructor makes evaluative comments about classroom performance. A fifth group of items deals with the instructor's organization and planning of the course. The final set of items considers the amount and difficulty of the work the instructor expects of his or her students.

Other Course Elements

Items in the third part of the catalog can be especially helpful to instructors concerned about improving instruction, since these items focus on specific course elements. Here an instructor may find the explanation for an overall low course rating. Or in considering ratings in this group, the instructor may discover concrete elements of a course that could be improved.

Teachers who use Instructor-designed Questionnaires may write several items of their own and have these included on the student rating form along with items from our catalog. CRLT also encourages teachers to select one or two open-ended questions for their student questionnaires. Anonymous written responses from students often illuminate the statistical picture and can be extremely helpful to teachers.

This report was written by Dr. James A. Kulik, Associate Research Scientist and Associate Director of CRLT. He joined the Center in 1968 and is an unusually perceptive judge of matters pertaining to student development, individualized instruction and now, student evaluation of teachers. Dr. Kulik is responsible for the development of the student rating form described in this *Memo*. (SCE)

FACULTY DEVELOPMENT FUND TEACHING AWARDS 1976–77

CRLT is pleased to be named as a granting agency in the newly-established U-M Faculty Development Fund. CRLT will review proposals from the faculty for projects aimed at improving the process of instruction, while the Rackham Graduate School will provide awards to support faculty research activities. Grants up to $5000 per person are designated for equipment, travel, released time, research assistance, and other usages appropriate to faculty development.

Projects will be considered which are designed to improve the quality of education through instructional changes and individual professional growth. Four general criteria against which all proposals will be evaluated are: 1) potential impact on student learning; 2) originality, reflecting new developments in instructional design or subject matter; 3) an integral plan for evaluation and review; and 4) continued usefulness for departments and schools involved.

Proposals will first be evaluated by deans of the individual schools and colleges, whose support and relative assessment will contribute to the decision-making process. The final selection will be made by a faculty committee.

The Fund is intended to maintain and to develop faculty versatility and to support new initiatives in teaching and research, placing emphasis on both the interests and skills of individual faculty members and on present and future needs of the teaching units.

Finally, every University teacher who uses the program of instructor-designed evaluations is required to include five core items in the student questionnaire. Four of these five core items are concerned with the student's overall attitude toward the course (e.g., "I would recommend this course to others"; "I would recommend the instructor for this course to a fellow student"). The fifth item in the University core ("I had a strong desire to take this course") is included to help in interpretation. Initial student disposition toward a course is one factor that is related to subsequent course ratings.

INTERPRETING STUDENT REACTIONS

Student responses to questionnaire items can usually be summarized easily. But interpretation of questionnaire responses is likely to be more difficult. Many instructors are uncertain about the standards to use for identifying strengths and weaknesses. Should college-wide or departmental norms be consulted? Should endorsement frequencies be considered alone, without reference to norms? Or is some other standard appropriate? In any case, the value of student ratings will be increased if the instructor focuses attention on specific items and on patterns of item responses rather than on a gross "teaching index" score.

Responses without Norms

In interpreting rating results, many teachers find it useful to consider endorsement frequencies first: how many students agree, strongly agree, or disagree with each item. Teachers should pay close attention to items for which endorsements fall below expectations; it is usually a cause for concern when a third of the students give unfavorable ratings to some aspect of a course. If a teacher considers an objective important, he or she should expect the great majority of students to feel that the objective has been reached. Teachers should succeed in areas that are important to them.

Many instructors also find it helpful to look at the median response for each item of their questionnaires. The median gives the middle or typical response. For CRLT's Instructor-designed Questionnaires, the median is a value between 1.0 and 5.0. If all students mark "strongly disagree" on an item, the median will be 1.0; if all mark "strongly agree," the median will be 5.0. A value between these extremes can be interpreted as the point on a 5-point scale below which 50 percent of student responses fall. Identification of items with high medians may help a teacher find relative strengths in teaching; lower medians may indicate relative weaknesses. High medians may be an occasion for congratulations, low medians a cause for concern.

"ELEVATING THE IMPORTANCE OF TEACHING"

Dr. Janet Lawrence is working with me on a two-year project aimed at "elevating the importance of teaching." This program is supported by the Fund for the Improvement of Postsecondary Education. We are examining the dimensions of merit recognition and reward that seem to be in force at this University. In addition, we are part of a consortium of 11 colleges and universities which, by various means, is seeking to implement the basic theme. CRLT is the coordinating agency and part of our task is to disseminate the findings to post-secondary education generally. To this end we are publishing a series of *Memo*-type reports called "CRITERIA—for the evaluation, support, and recognition of college teachers." The first three are now available: I. The Scope of National Project III, II. The Evaluation of Teachers, and III. Institutional Support for Teaching.

Call (313/764-0505) or write Dr. Janet Lawrence at U-M CRLT, 109 E. Madison, Ann Arbor, MI 48109 if you would like to receive these reports. There is no charge. (SCE)

Norms and Relative Scores

Success comes easier in some areas of teaching than in others. Nearly all teachers, for example, get good ratings on the item, "This teacher is a competent resource person." Far fewer succeed on the item, "This teacher motivates me to do my best work." Some teaching skills are apparently harder to perfect than others, and some objectives are more challenging. Information about how other teachers are rated on questionnaires can help a teacher distinguish between easy and hard objectives, between real and imagined accomplishments. Normative data can separate real victories from paper ones.

Along with endorsement frequencies, therefore, users of CRLT's Instructor-designed Questionnaires are told in descriptive terms about their standing on each item, relative to all other University of Michigan teachers who have selected the item. An instructor's median on any given item may be described as "high" (interpreted as the upper 10% of past responses), "high average" (upper 30%), "average" (middle 40%), "low average" (lower 30%), or "low" (lower 10%).

These relative positions are only rough guidelines; it is a good idea to keep the limitations of such scores in mind. First of all, whenever norms are involved, half of those compared will be above the norm, and half below. If every teacher is superb, fifty percent will still be labeled below average. If every teacher is dull, fifty percent will still be labeled above average. Transformation to relative scores can be misleading when there is not a full range of variation in the absolute scores. If the "norm" for a given item is based on comparatively few instances of use, it may not be a valid indicator of a teacher's relative standing in that area. If any of a number of factors ordinarily beyond a teacher's control (size of class, motivation of students for taking the course, etc.) are either highly favorable or unfavorable, college-wide norms cannot accurately be applied to the teacher.

Personal Norms

A good standard for teachers to use in interpreting rating results is their own performance in similar courses in previous years. It is therefore a good idea for teachers to save their course evaluations to see what changes may occur from year to year. Over time, teachers who save rating results also learn about factors that influence their ratings positively and negatively.

USING STUDENT REACTIONS

Teachers who recognize weaknesses in their teaching usually want to do something to improve. But teachers are often unaware of potential steps to take, and some even doubt the possibility of improvement. Faculty members can improve their teaching on their own, but it usually helps if they have access to some expert guidance. It is also helpful if the teacher has a colleague to talk to.

CRLT was established in 1962 at the recommendation of the faculty as a place to turn for information and assistance on teaching. We believe that our new student rating form is an excellent diagnostic instrument, an appropriate first step for individual teachers who want a profile of their strengths and weaknesses in the classroom. The staff members at CRLT are available to talk with teachers about the meaning of their students' ratings and/or to suggest relevant reading material. You may wish to examine earlier issues of our *Memo* reports, journal articles, or books about college teaching written by fellow faculty members: *Teaching Tips* (McKeachie) and *Motivation for Learning* (Ericksen).

There is clear evidence that student opinions are most helpful when teachers discuss these responses with a colleague. And yet few teachers discuss their ratings with others. Many instructors are reluctant to admit that problems arise in teaching, and misinformation about what amounts to pedagogical success and failure is great. To facilitate communication among University faculty members, CRLT has chosen a group of Associates who are willing (and particularly qualified) to discuss improvement of teaching with their colleagues. A list of these CRLT Associates is available at the Center (764-0505).

SUGGESTED READING

The following are available for reference at CRLT:

Bergquist, W. H. & Phillips, S. R. *A handbook for faculty development.* Washington, DC: The Council for the Advancement of Small Colleges, 1975.

Centra, J. A. *Strategies for improving college teaching.* Prepared by ERIC Clearinghouse. Washington, DC: American Association for Higher Education, December 1972.

Doyle, K. O., Jr. *Student evaluation of instruction.* Lexington, MA: Lexington Books, 1975.

Eble, K. E. *The recognition and evaluation of teaching.* Washington, DC: American Association of University Professors, 1971.

Gage, N. L. "Student ratings of college teaching: Their justification and proper use." In Allen, Melnik, and Peele (Eds.), *Reform renewal reward.* Amherst, MA.: Clinic to Improve University Teaching, University of Massachusetts, 1975. Pp. 121–135.

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Miller, R. I. *Evaluating faculty performance.* San Francisco: Jossey-Bass Publishers, 1972.

Miller, R. I. *Developing programs for faculty evaluation.* San Francisco: Jossey-Bass Publishers, 1973.

Pace, C. R. *Evaluating learning and teaching.* San Francisco: Jossey-Bass Publishers, 1973.

Seldin, P. *How colleges evaluate professors.* New York: Blythe-Pennington, 1975.

CATALOG OF ITEMS FOR INSTRUCTOR-DESIGNED QUESTIONNAIRES

Student Development

Knowledge and Skills

1. I learned a good deal of factual material in this course.
2. I gained a good understanding of concepts and principles in this field.
3. I learned to apply principles from this course to new situations.
4. I learned to identify main points and central issues in this field.
5. I learned to identify formal characteristics of works of art.
6. I developed the ability to solve real problems in this field.
7. I developed creative ability in this field.
8. I developed the ability to communicate clearly about this subject.
9. I developed the ability to carry out original research in this area.
10. I developed an ability to evaluate new work in this field.
11. I learned to recognize the quality of works of art in this field.

Interests and Curiosity

12. I deepened my interest in the subject matter of this course.
13. I developed enthusiasm about the course material.
14. I was stimulated to do outside reading about the course material.
15. I was stimulated to discuss related topics outside of class.
16. I developed plans to take additional related courses.
17. I developed a set of overall values in this field.

Social Skills and Attitudes

18. I participated actively in class discussion.
19. I developed leadership skills in this class.
20. I developed new friendships in this class.
21. I developed greater awareness of societal problems.
22. I became interested in community projects related to the course.
23. I learned to value new viewpoints.
24. I reconsidered many of my former attitudes.

Self-concept

25. I gained a better understanding of myself through this course.
26. I gained an understanding of some of my personal problems.
27. I developed a greater sense of personal responsibility.
28. I increased my awareness of my own interests and talents.
29. I developed more confidence in myself.

Vocational Skills and Attitudes

30. I developed skills needed by professionals in this field.
31. I learned about career opportunities.
32. I developed a clearer sense of professional identity.

Instructor Ratings

Instructor Skill

33. The instructor gives clear explanations.
34. The instructor makes good use of examples and illustrations.
35. The instructor stresses important points in lectures or discussions.
36. The instructor is enthusiastic.
37. The instructor puts material across in an interesting way.
38. The instructor seems to enjoy teaching.
39. The instructor appears to have a thorough knowledge of the subject of the course.
40. The instructor seems knowledgeable in many areas.
41. The instructor is not confused by unexpected questions.
42. The instructor is skillful in observing student reactions.
44. The instructor teaches near the class level.

Rapport

45. The instructor is friendly.
46. The instructor is permissive and flexible.
47. The instructor maintains an atmosphere of good feeling in the class.
48. The instructor acknowledges all questions to the best of his or her ability.
49. The instructor treats students with respect.
50. The instructor encourages constructive criticism.
51. The instructor is willing to meet with and help students outside class.
52. The instructor gives individual attention to students in this course.

Interaction

53. Students frequently volunteer their own opinions.
54. One real strength of this course is the classroom discussion.
55. Students in this course are free to disagree and ask questions.

Feedback

56. The instructor suggests specific ways students can improve.
57. The instructor tells students when they have done particularly well.
58. The instructor keeps students informed of their progress.

Organization

59. The instructor has everything going according to schedule.
60. The instructor follows an outline closely.
61. The instructor uses class time well.
62. The instructor seems well prepared for each class.
63. The objectives of the course were clearly explained.
64. Work requirements and grading system were clear from the beginning.

Difficulty

65. The amount of work required is appropriate for the credit received.
66. The amount of material covered in the course is reasonable.
67. The instructor sets high standards for students.
68. The instructor has made the course sufficiently difficult to be stimulating.

Course Elements

Teaching Assistant

69. My TA gives clear and understandable explanations.
70. My TA is enthusiastic.
71. My TA appears to have a thorough knowledge of the subject of the course.
72. My TA is skillful in observing student reactions.
73. My TA is friendly.
74. In my TA's section, students volunteer their own opinioins.
75. My TA tells students when they have done a particularly good job.
76. My TA plans class activities in detail.
77. My TA asks for more than students can get done in the time available.
78. My TA sets high standards for students.
79. My TA grades papers (exams, homework) fairly.

Recitation Section

80. The recitation section is a valuable part of this course.
81. The recitation section is a great help to learning.
82. There is ample opportunity to ask questions in the recitation section.
83. The recitation section clarifies lecture material.
84. The recitation section extends the coverage of topics presented in lectures.
85. Students get individual attention in the recitation section.

Written Assignments

86. Written assignments (papers, problem sets) seem carefully chosen.
87. Written assignments are interesting and stimulating.
88. Written assignments make students think.
89. Directions for written assignments are clear and specific.
90. Written assignments require a reasonable amount of time and effort.
91. Written assignments are relevant to what is presented in class.
92. Written assignments are graded fairly.
93. Written assignments are returned promptly.

Reading Assignments

94. Reading assignments seem carefully chosen.
95. Reading assignments are interesting and stimulating.
96. Reading assignments make students think.
97. Reading assignments require a reasonable amount of time and effort.
98. Reading assignments are relevant to what is presented in class.

Laboratory Assignments

99. The laboratory was a valuable part of this course.
100. Laboratory assignments seem carefully chosen.
101. Laboratory assignments are interesting and stimulating.
102. Laboratory assignments make students think.
103. Directions for laboratory assignments are clear and specific.
104. Laboratory assignments require a reasonable amount of time and effort.
105. Laboratory assignments are relevant to what is presented in class.
106. Laboratory reports are graded fairly.
107. Laboratory reports are returned promptly.

Textbook

108. The textbook makes a valuable contribution to the course.
109. The textbook is easy to read and understand.
110. The textbook presents various sides of issues.
111. The textbook is accurate.

Media

112. Films are a valuable part of this course.
113. Films used in this course are interesting and stimulating.
114. Films used in this course are a great help to learning.
115. Videotapes are a valuable part of this course.
116. Videotapes used in this course are interesting and stimulating.
117. Videotapes used in this course are a great help to learning.

118. Slides are a valuable part of this course.
119. Slides used in this course are interesting and stimulating.
120. Slides used in this course are a great help to learning.
121. Audiotapes are a valuable part of this course.
122. Audiotapes used in this course are interesting and stimulating.
123. Audiotapes used in this course are a great help to learning.

Exams

124. Examinations cover the important aspects of the course.
125. The exams cover the reading assignments well.
126. The exams cover the lecture material well.
127. Exams are creative and require original thought.
128. Exams are reasonable in length and difficulty.
129. Examination items are clearly worded.
130. The exams are returned in a reasonable amount of time.
131. The examinations are graded very carefully and fairly.
132. The test items are adequately explained after a test is given.

Grading

133. Grades are assigned fairly and impartially.
134. The grading system was clearly explained.
135. The instructor has a realistic definition of good performance.

Instructor-Written Items

136. – Instructor-written –
137. – Instructor-written –
138. – Instructor-written –

Open-Ended Questions

139. Comment on the quality of instruction in this course.
140. How can the instructor improve the teaching of this course?
141. Which aspects of the course did you like best?
142. Which aspects of the course did you like least?
143. What changes would you make in the lectures?
144. What changes would you make in the readings?
145. What changes would you make in the discussion sections?
146. What changes would you make in the examinations?
147. Which aspects of the course were most valuable?
148. Which aspects of the course were least valuable?

University Core Items

149. I would recommend this course to others.
150. I would recommend the instructor for this course to a fellow student.
151. The instructor motivates me to do my best work.
152. I feel that I am performing up to my potential in this course.
153. I had a strong desire to take this course.

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